

IntelliSpark® Ignition Controller System

The IntelliSpark 32/16/8 series ignition systems are capacitive discharge, low-tension type designs. The system is capable of generating precise spark timing that improves fuel economy, load balance and ignition stability. The controller design incorporates a state-of-the-art 16-bit microcontroller. This technology provides users with a highly flexible solution to meet their ignition needs.

The user can choose from one of five methods of crankshaft sensing for a 4-stroke engine and two methods for a 2-stroke engine.

Murphy's smart ignition coils used with this product incorporate a sense lead connection for real-time spark plug demand voltage measurements by the ignition controller. This allows the controller to:

- Measure demand on each cylinder's plug for diagnostic purposes;
- Automatically control the energy delivered to the smart coils to optimize spark plug life;
- Use the measured demand in the unique camless crank method to determine the compression stroke, eliminating the need for a camshaft sensor.

Several smart coil designs are available to accommodate specific ignition requirements including: remote mount coils and plug-mounted (integral) coils, non-hazardous or CSA Class I, Div. 2 rated versions.

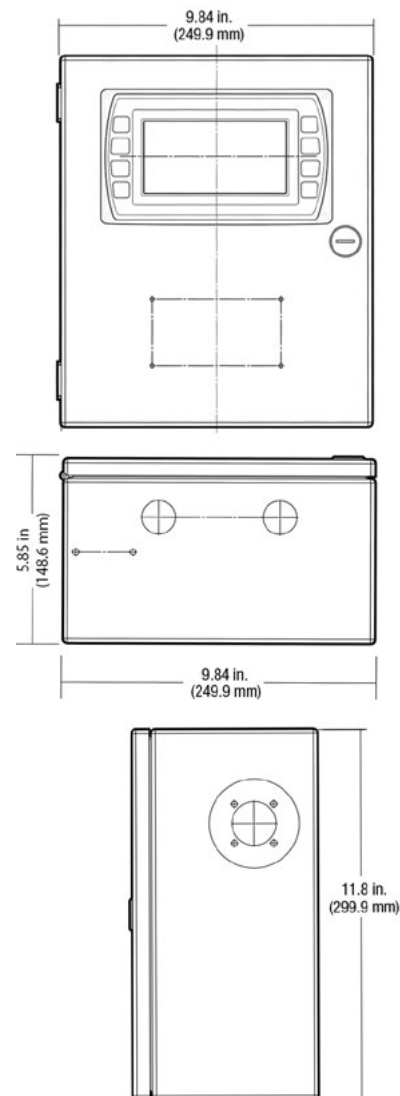
This system also includes the Murphy PV-450 full-color screen display for control functions, monitoring, programming and diagnostic testing. The eight-button display includes comprehensive built-in help files and wiring information for the coil harness and a database of common engines for ease of configuration.

Features

- Crankshaft-referenced 16-bit microprocessor based system
- Patented Smart Coil technology
- Automatic energy control
- Five timing reference options including camless operation
- Two field-adjustable timing schedules
- Optimized engine combustion and performance
- True primary and secondary diagnostics



Dimensions



Specifications

Power Requirements:

IS-16/8: 10-30 VDC (12/24 VDC nominal) 3.0 Amps max

IS-32: 10-30 VDC, 6.0 Amps max

Note: The input current is dependent on firing rate

Environment:

Temperature Operating Range: -4° to +158° F
(-20° to +70° C)

Enclosure Rating: IP66 with display mounted in the enclosure box;
Type 4 without display mounted in the enclosure box

Third Party Approvals:

CSA Certified for Class I, Div 2, Groups B, C, D

IS-8: Fires 8 outputs

IS-16: Fires 16 outputs

IS-32: Fires 32 outputs, 2 outputs can fire simultaneously

Energy Storage:

IS-32/16/8: 180 mJ max, per tank capacitor

Communications:

IS-32/16/8: An auxiliary comm port is available, RS-485 interface,
MODBUS protocol

Note: This port has a user programmable slave ID, runs at
9600 baud or 19.2K.

All parameters available can be modified in parallel using the main
front panel display.

Output Electrical Specifications:

IS-8: Single tank capacitor

IS-16: Dual, alternately fired tank capacitors

IS-32: Quad, alternately fired pairs of tank capacitors

Ignition Outputs are High-side firing referenced to the T pin
on the output harness

Note: These outputs are not ground referenced unless the T lead is
grounded. Recommend careful adherence to installation instructions.

Maximum Output Current Pulse Rating: 40 Amps

Note: Current pulse amplitude is dependent on the coils in use
and the tank capacitor voltage.

IT-230 Series coils: 7 Amp pulse @ 230Volts

IT-150 Series coils: 35 Amps @ 150 Volts

IT-250 series coils: 20 Amps @ 250 Volts

4/20 mA Inputs:

4/20mA A: This input retards timing (if programmed) when
schedule A is active.

4/20mA B: This input retards the timing (if programmed) when
schedule B is active.

How to Order

Part Number	Model and Description	Notes
72700256	IS-8,Ignition Module, 8 Outputs, Without Display	IntelliSpark Ignition Module
72700252	IS-8D,Ignition Module, 8 Outputs, With Display	
72700257	IS-16,Ignition Module, 16 Outputs, Without Display	
72700253	IS-16D,Ignition Module, 16 Outputs, With Display	
72700258	IS-32,Ignition Module, 32 Outputs, Without Display	
72700254	IS-32D,Ignition Module, 32 Outputs, With Display	
72700249	Display Module, PV450NV-03-CSA-IS	Remote Display Unit
78001106	Cable, Remote Power 50 ft., PVW-450-PWR-50 ft.	
78001107	Cable, Remote Communication 50 ft., PVW-450-RS485-50 ft.	
NOTE: Either choose an ignition module that comes with the display built into the enclosure or order loose display and cables for remote mount.		

Please contact your local Murphy Sales Representative for a complete IntelliSpark Ignition System and Murphy products from Enovation Controls.

A local distributor can be found at www.fwmurphy.com/wheretobuy/us-sales-distributors.